

REMARKS

The Office Action mailed on December 15, 2003 has been carefully considered and the Examiner's remarks are appreciated. Claims 2, 3, 6, 7, 9, 19, 20, 24, 25, 27, 28, and 30 are canceled. Claims 1, 4, 8, 13, 15, 17, 18, 21, 23, and 26 have been amended. Therefore claims 1, 4, 5, 8, 10-18, 21-23, 26, 29, 31, and 32 are presented for examination. The foregoing amendments are responsive to the Office Action, with support for the amendments found in the Specification, Claims, and Drawings.

Brief Discussion of the Invention

The present invention is an electrical connector and connector chip which is formed from a sheet of electrically conductive material that lies between two layers of nonconducting material. A passageway is provided which includes an opening formed in the sheet by flexible cantilevered fingers centripetally extending into the passageway. When an electrically conductive pin is inserted into the passageway, the flexible fingers bend by a cantilever-like deflection (i.e. curvilinear deflection) in the direction of pin insertion, and the opening adapts to the diameter of the pin. Due to the curvilinear, cantilever-like deflection, the periphery of the opening, i.e. the unsupported ends of the fingers, applies a normally-directed friction force to the sides of the pin, and thus holds the pin within the opening and in contact with the sheet.

Brief Discussion of U.S. Pat. No. 4,700,214 to Johnson

U.S. Pat. No. 4,700,214 to Johnson discloses electrical circuitry comprising a plurality of layers, each layer including one or more electrical pathways and insulation for insulating at least part of one layer from another layer. The pathways comprise repeating flower-shaped patterns having eight wedge-shaped sections grouped in pairs to form quarter sections and an opening at the center of the flower pattern. As shown in Figure 7 and 8 of Johnson, a backerboard is positioned underneath a conducting layer (comprising the pathways), with a circular hole of the backerboard aligned with the hole of the flower-shaped pattern. A pin is then forced through the center of the flower-shaped pattern and the circular hole of the backerboard to thereby sharply crimp the wedges of the flower pattern around a perimeter edge of the backerboard hole, and into the backerboard hole between the pin sidewall and the sidewall of the backerboard hole. In this manner of force-fitting, an electrical connection may be established between the pin and the electrical pathways.

Discussion of the Office Action

In the Office Action of December 15, 2003, the Examiner objected to the drawings with respect to the "resilient biasing." And the Examiner objected to the Specification as introducing new matter, and also rejected claims 1-32 under 35 U.S.C. 112, first paragraph. The Examiner also rejected claims 1-9, 11-13, 15, 17-31 under 35 U.S.C. §102(b), and he rejected claims 10, 14, 16, and 32 under 35 U.S.C. §103(a).

Discussion of the New Matter Objections in the Specification

The Examiner objected to the amendment filed 2-19-03 under 35 U.S.C. 132 as introducing new matter. In particular, the Examiner objected to the statement, *"a resilient-biasing in the insertion direction of the pin without crimping or otherwise permanently bending of the fingers."* Applicant has amended the Specification to remove the above statement. In its place, Applicant has provided additional description of Figure 3 and in particular has described the deflection shown therein as a "curvilinear deflection" which is characteristic of a cantilever and cantilever-like deflection. Applicant submits the additional description is appropriate pursuant to In re Wolfensperger (133 USPQ 537, 542), as follows in part:

"The practical, legitimate inquiry in each case of this kind is what the drawing in fact discloses to one skilled in the art. Whatever it does disclose may be added to the specification in words without violation of the statute and rule which prohibits "new matter," 35 U.S. C. 132, Rule 118, for the simple reason that what is originally disclosed cannot be "new matter" within the meaning of this law."

Discussion of the Rejections under 35 U.S.C. §112, First Paragraph

The Examiner rejected claims 1-32 under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. In particular, the Examiner stated, *"The disclosure does not support Amendment B filed on 2-18-03 where resilient-biasing is defined to be without crimping or otherwise permanently bending of the fingers after the pin has*

been removed." Applicant has removed all reference to "resilient biasing" and have instead included the "curvilinear deflection" language where appropriate.

Discussion of the Rejections under 35 U.S.C. §102(b)

Claims 1-9, 11-13, 15, 17-31 under 35 were rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Pat. No. 4,700,214 to Johnson. Applicant has amended or canceled the aforementioned claims to more particularly point out the invention by removing the reference to "resiliently biasing" means and replacing it with "flexible cantilever" means, which is further claimed as *"being curvilinearly deflectable by the pin so as to produce a normal force against a lateral side of the pin and an associated frictional force which resists withdrawal of the pin from the passageway."* It is respectfully submitted that this limitation is not taught or suggested by Johnson or the other prior art references since a sharply angled crimping is performed which cannot be characterized as a "curvilinear deflection" notable of cantilever configurations. Similar changes have been made to independent claims 15, 18, and 23. Thus is it submitted that the Examiner's rejections have been overcome in view of MPEP §2131 as follows in part:

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference"

Additionally, it is respectfully submitted that claims 4, 5, 8, 11-13, 17, 18, 21, 22, 23, 26, 29, and 31 are also in condition for allowance as being dependent on allowable base claims 1, 15, 18, and 23. Therefore, the 102(b) based rejections of should be withdrawn.

Summary

Applicant respectfully submits that Claims 1, 4, 5, 8, 10-18, 21-23, 26, 29, 31, and 32 are in condition for allowance. Applicant respectfully requests allowance of claims 1, 4, 5, 8, 10-18, 21-23, 26, 29, 31, and 32.

In the event that the Examiner finds any remaining impediment to the prompt allowance of these claims that could be clarified with a telephone conference, he is respectfully requested to initiate the same with the undersigned at (925) 422-7274.

Respectfully submitted,

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By: 

Mike C. Staggs
Attorney for Applicant
Registration No. 50,938

Lawrence Livermore National Lab
7000 East Avenue, L-703
Livermore, CA 94550
TEL: (925) 422-7274
FAX: (925) 423-2231